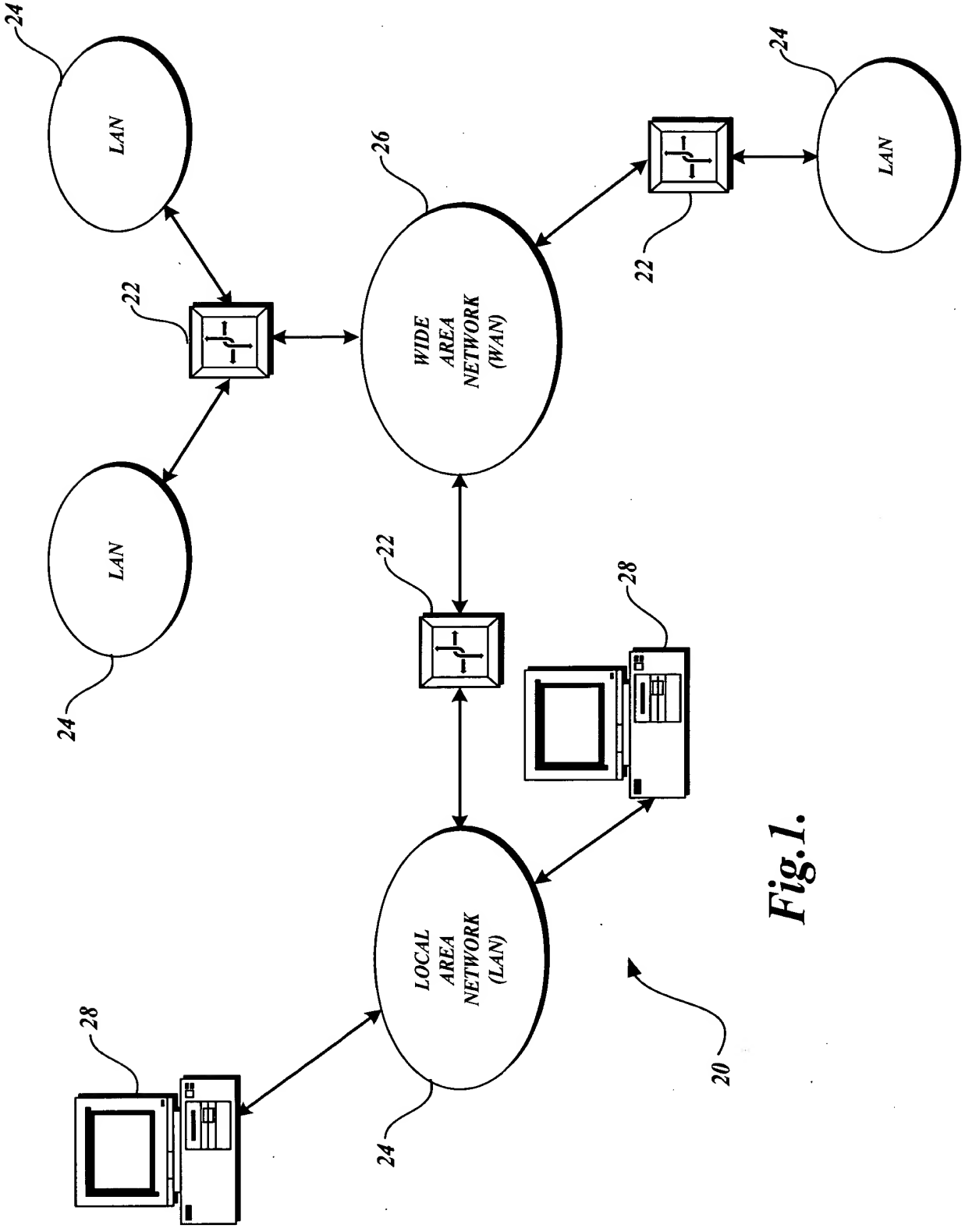
LAN
24
22
WIDE AREA NETWORK (WAN)
26
LAN
LAN
LOCAL AREA NETWORK (LAN)
28
20

Fig.1.

Patent Number

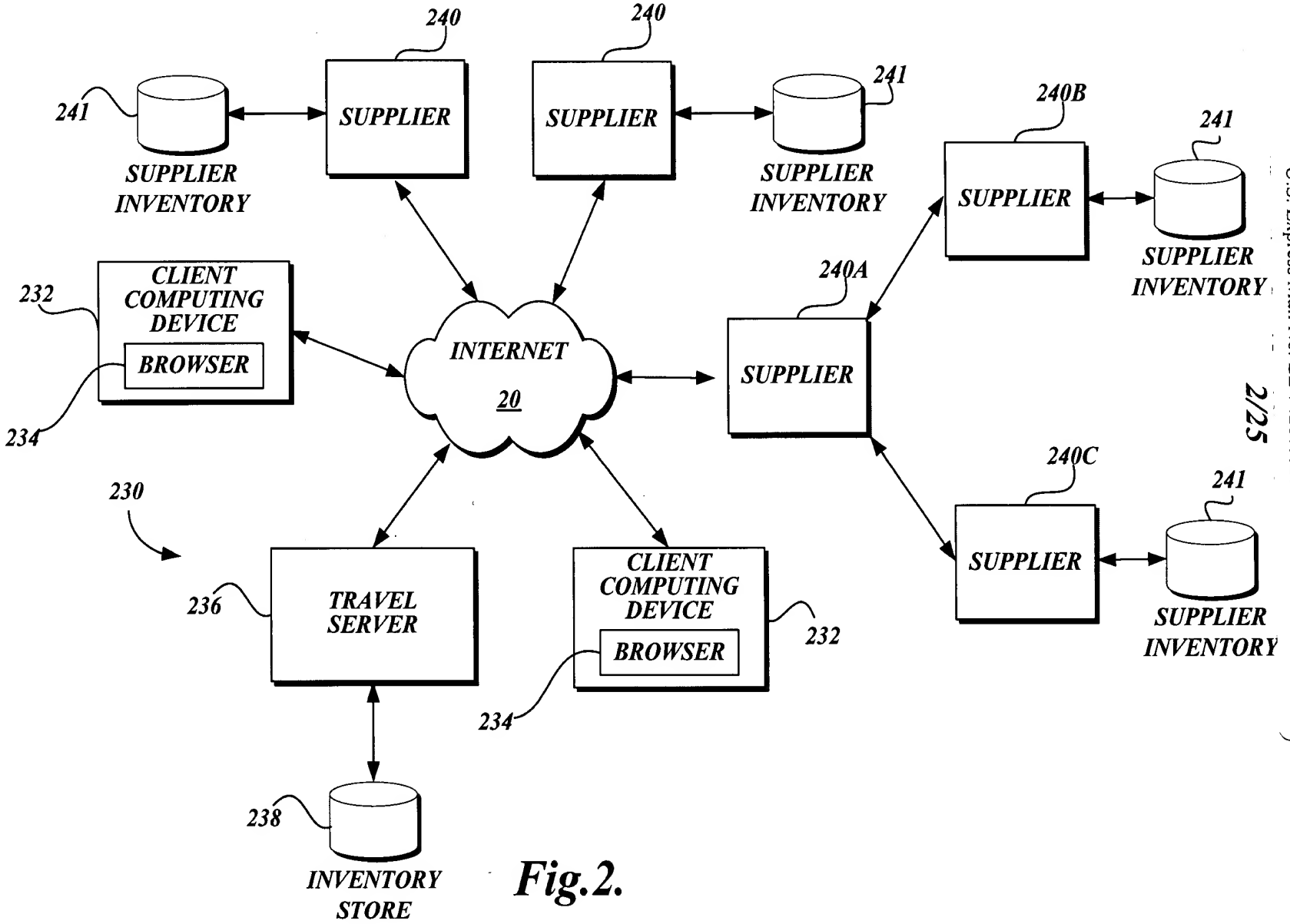

Fig.2.

Title: SYSTEM AND METHOD FOR MANAGING
Inventors: R.A. Vaughn et al.
Docket No.: EXIN117646
U.S. Express Mail No. EL 742875959 US

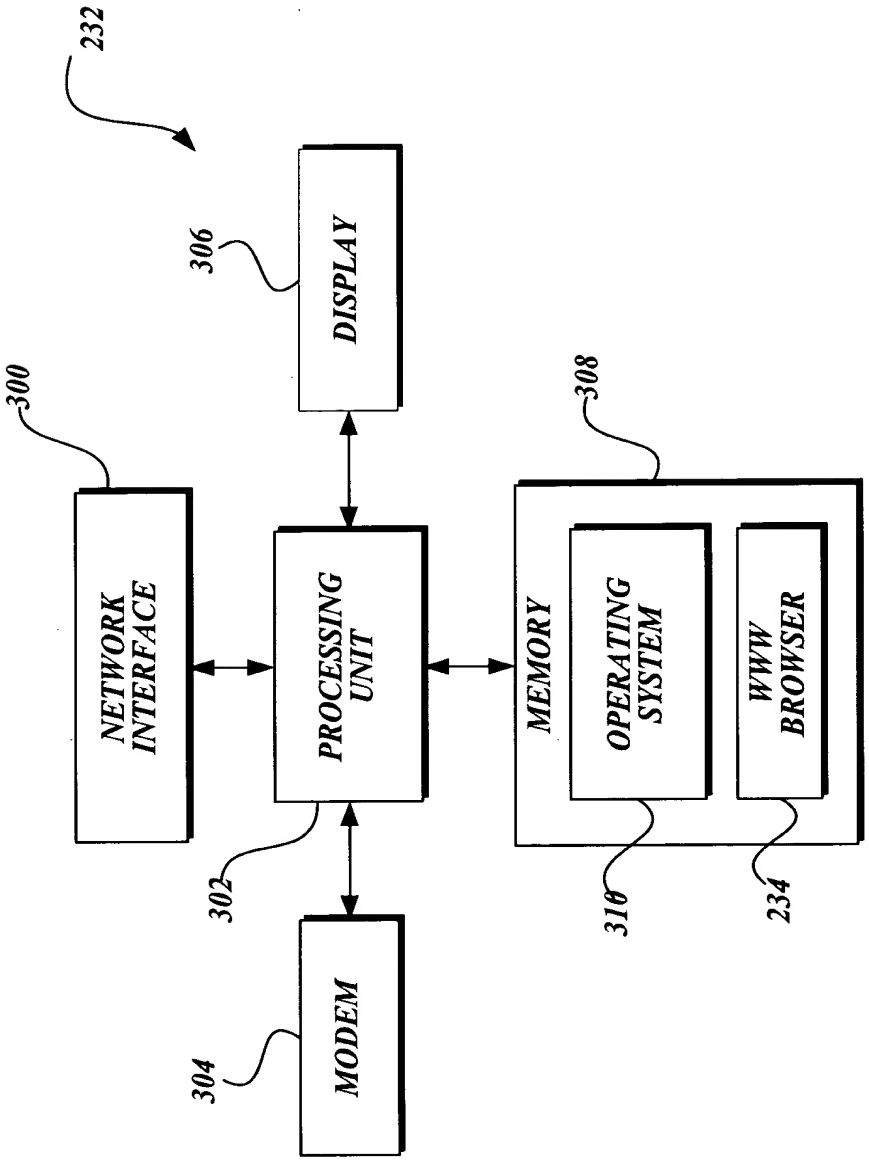
232
306
DISPLAY
300
308
NETWORK INTERFACE
PROCESSING UNIT
MEMORY
OPERATING SYSTEM
WWW BROWSER
302
310
234
304
MODEM

Fig.3.

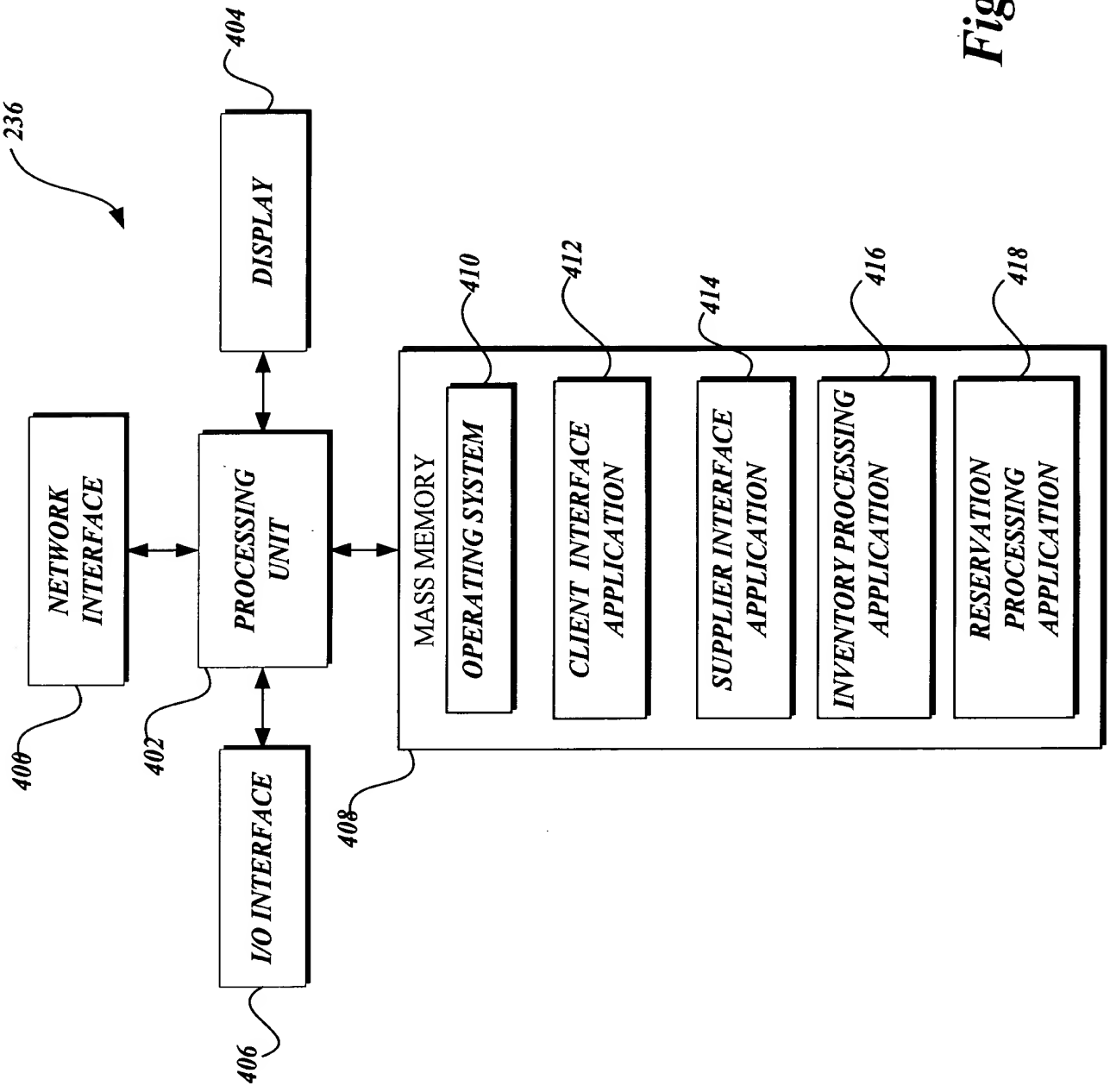
236
404
DISPLAY
NETWORK INTERFACE
PROCESSING UNIT
I/O INTERFACE
400
402
406
408
MASS MEMORY
410
OPERATING SYSTEM
412
CLIENT INTERFACE APPLICATION
414
SUPPLIER INTERFACE APPLICATION
416
INVENTORY PROCESSING APPLICATION
418
RESERVATION PROCESSING APPLICATION

Fig.4.

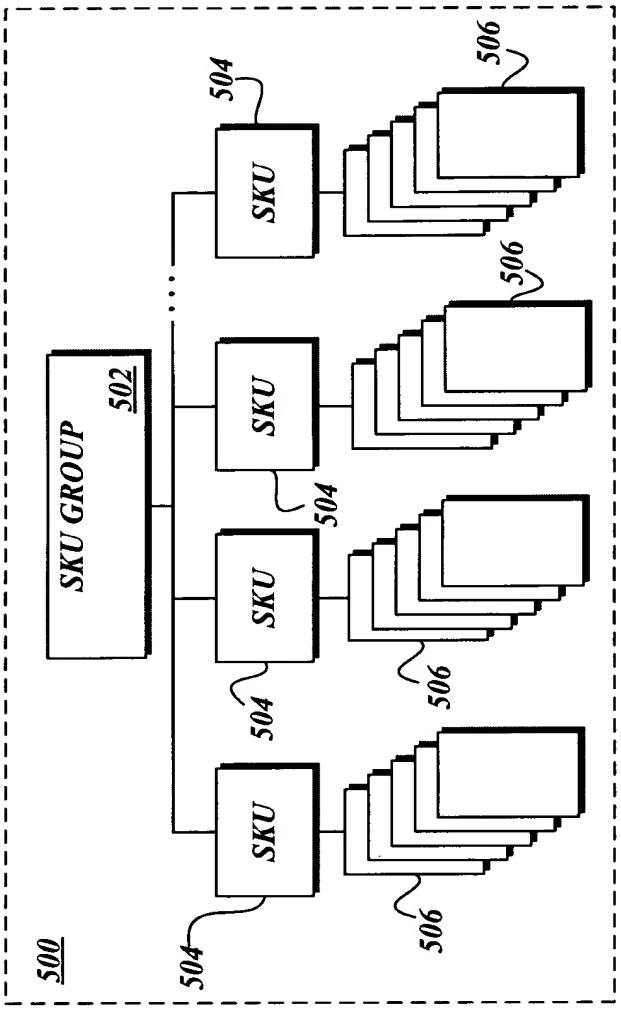
500
SKU GROUP
502
SKU
SKU
SKU
SKU
504
504
504
504
506
506
506
506

Fig.5.

500

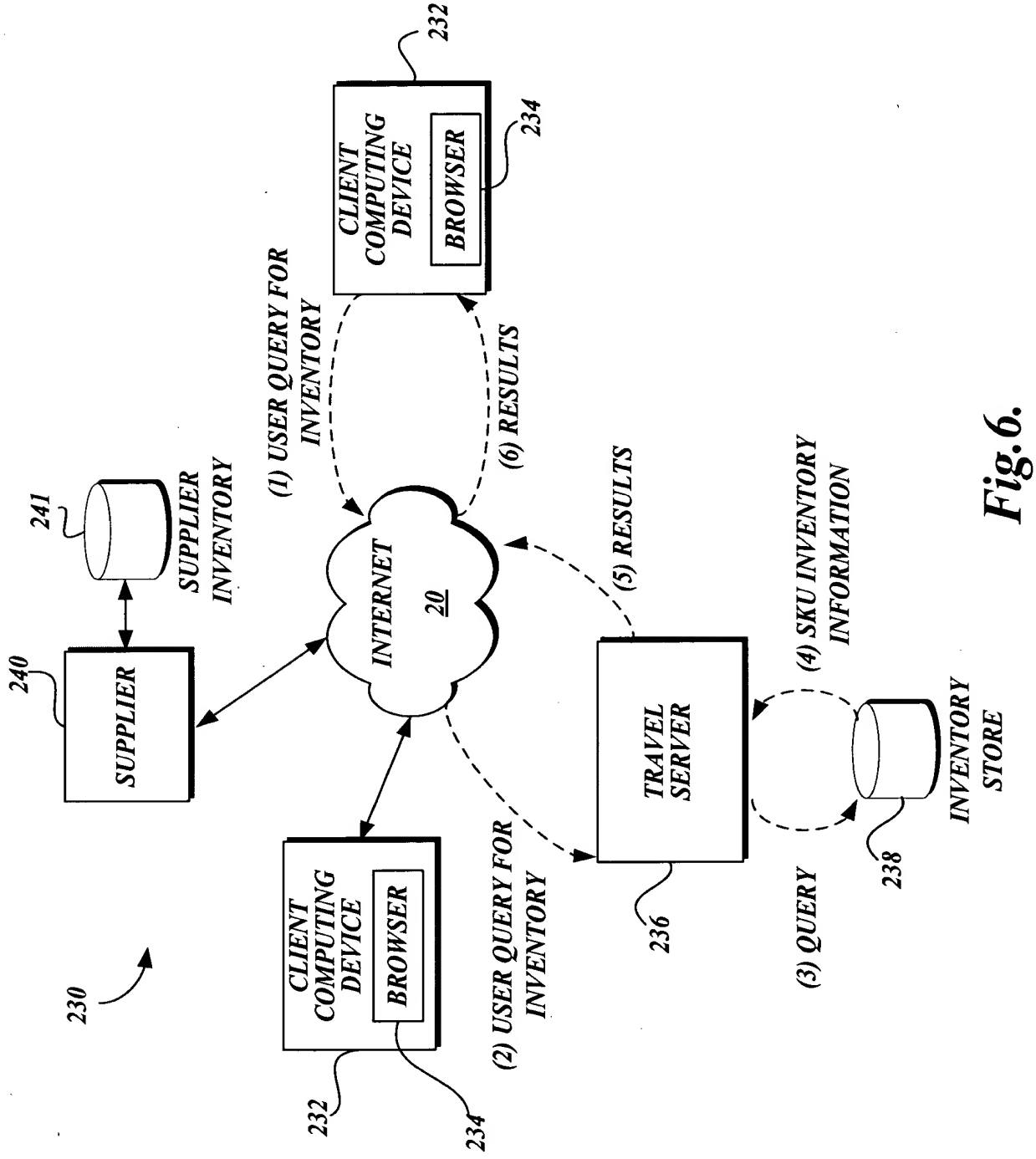
230
SUPPLIER
240
241
SUPPLIER INVENTORY
INTERNET
20
CLIENT COMPUTING DEVICE
BROWSER
232
234
(1) USER QUERY FOR INVENTORY
(2) USER QUERY FOR INVENTORY
(3) QUERY
(4) SKU INVENTORY INFORMATION
(5) RESULTS
(6) RESULTS
TRAVEL SERVER
236
INVENTORY STORE
238

Fig. 6.

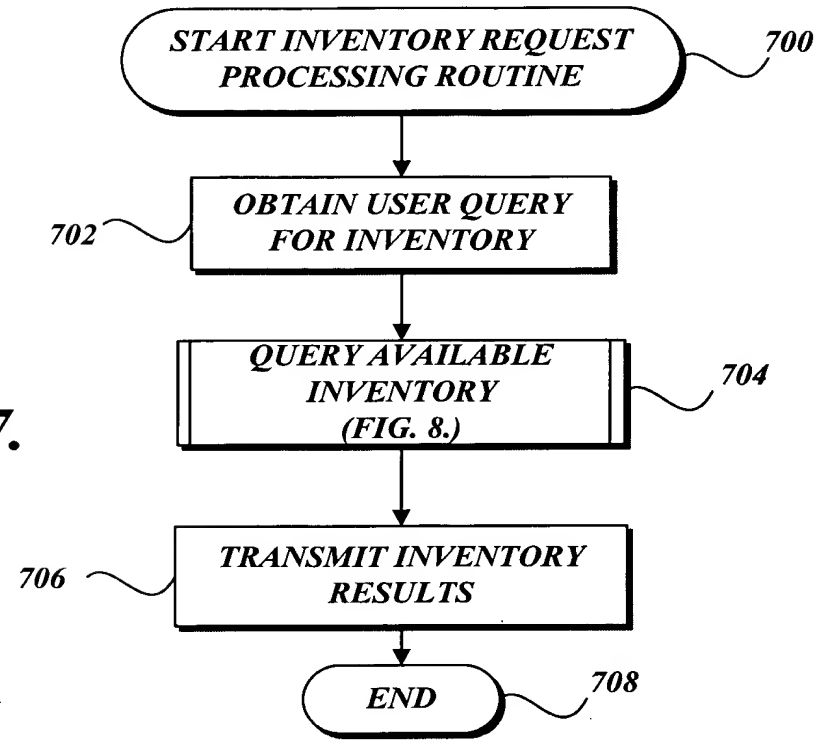
START INVENTORY REQUEST PROCESSING ROUTINE
700
OBTAIN USER QUERY FOR INVENTORY
702
QUERY AVAILABLE INVENTORY (FIG. 8.)
704
TRANSMIT INVENTORY RESULTS
706
END
708

Fig. 7.

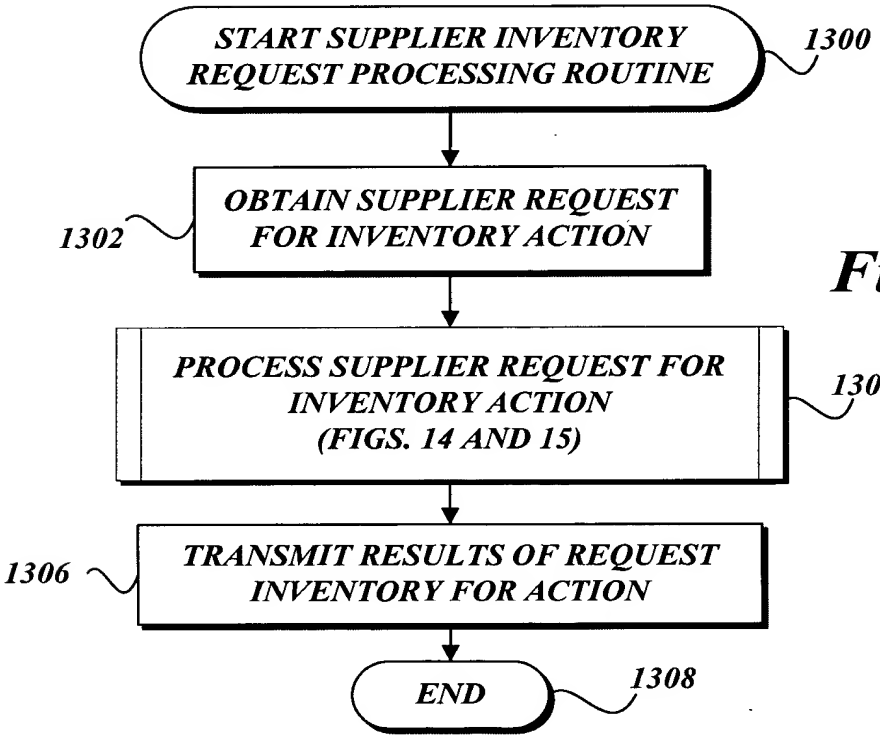
START SUPPLIER INVENTORY REQUEST PROCESSING ROUTINE
1300
OBTAIN SUPPLIER REQUEST FOR INVENTORY ACTION
1302
PROCESS SUPPLIER REQUEST FOR INVENTORY ACTION (FIGS. 14 AND 15)
1304
TRANSMIT RESULTS OF REQUEST INVENTORY FOR ACTION
1306
END
1308

Fig. 13.

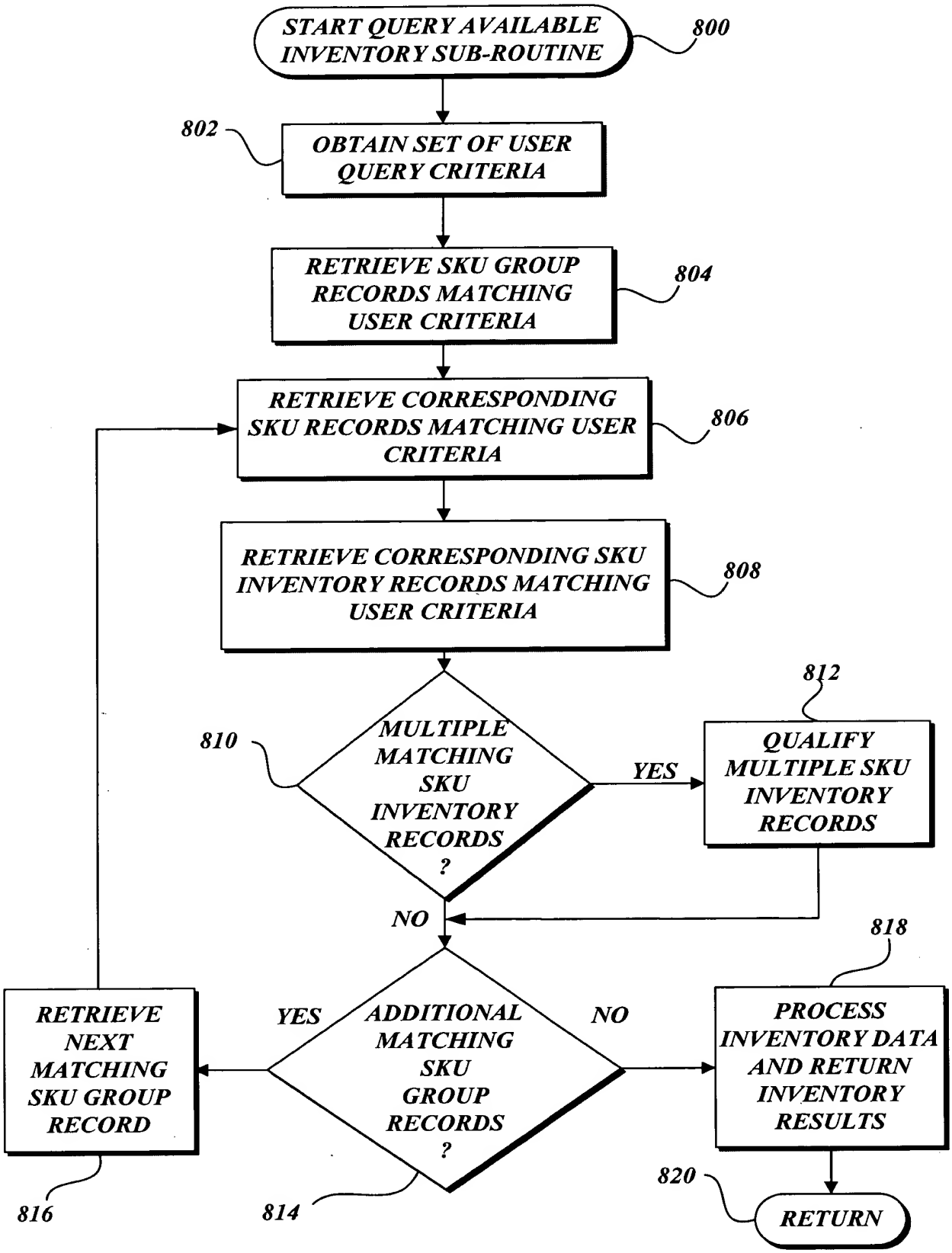
START QUERY AVAILABLE INVENTORY SUB-ROUTINE
800
802
OBTAIN SET OF USER QUERY CRITERIA
RETRIEVE SKU GROUP RECORDS MATCHING USER CRITERIA
804
RETRIEVE CORRESPONDING SKU RECORDS MATCHING USER CRITERIA
806
RETRIEVE CORRESPONDING SKU INVENTORY RECORDS MATCHING USER CRITERIA
808
MULTIPLE MATCHING SKU INVENTORY RECORDS ?
810
YES
812
QUALIFY MULTIPLE SKU INVENTORY RECORDS
NO
ADDITIONAL MATCHING SKU GROUP RECORDS ?
YES
NO
814
RETRIEVE NEXT MATCHING SKU GROUP RECORD
816
PROCESS INVENTORY DATA AND RETURN INVENTORY RESULTS
818
820
RETURN

Fig.8.

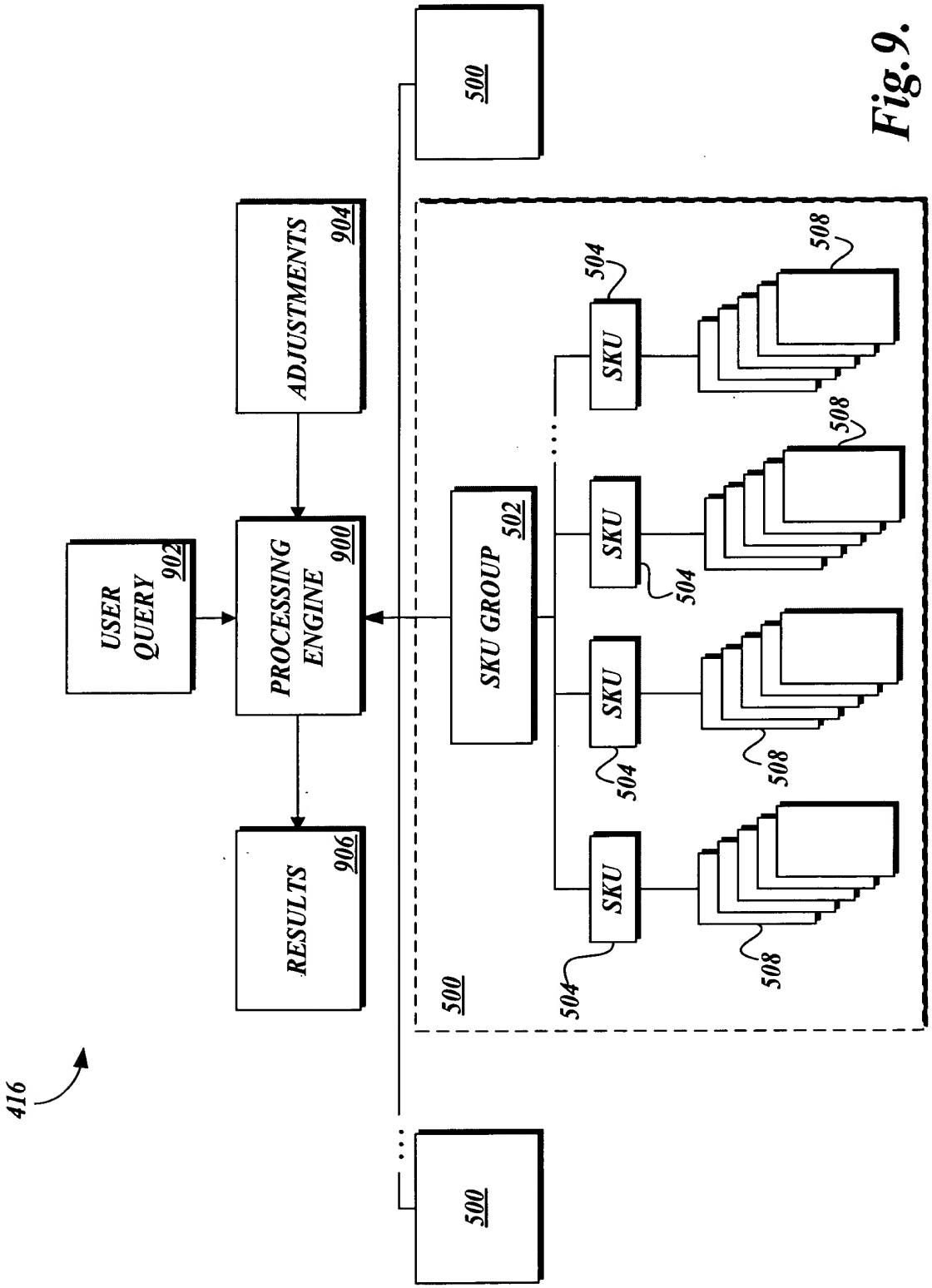
500
ADJUSTMENTS 904
USER QUERY 902
PROCESSING ENGINE 900
RESULTS 906
SKU GROUP 502
SKU
504
508
500
416

Fig. 9.

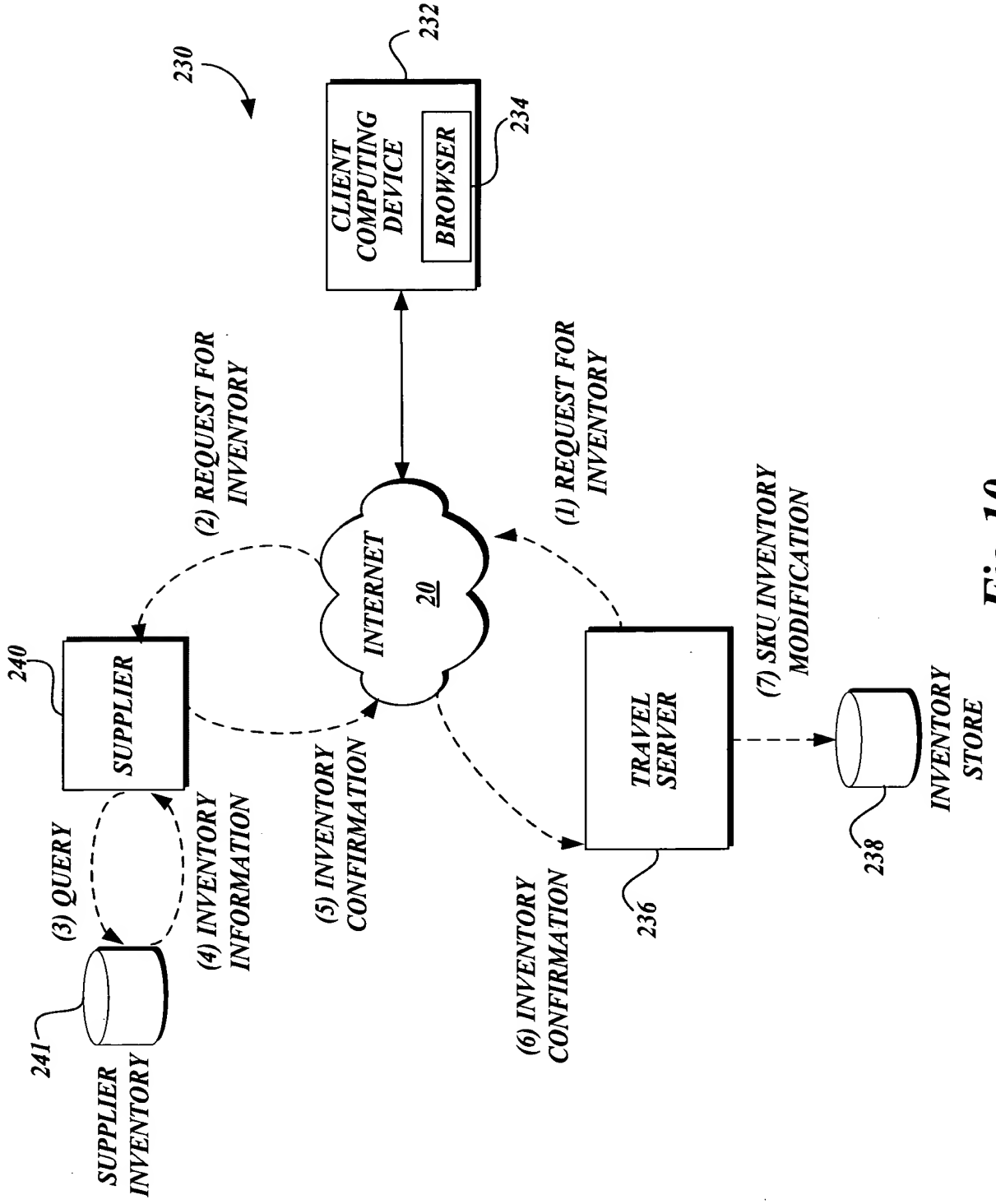
230
232
CLIENT COMPUTING DEVICE
BROWSER
234
(2) REQUEST FOR INVENTORY
(1) REQUEST FOR INVENTORY
INTERNET 20
240
SUPPLIER
(3) QUERY
(4) INVENTORY INFORMATION
(5) INVENTORY CONFIRMATION
(6) INVENTORY CONFIRMATION
TRAVEL SERVER
(7) SKU INVENTORY MODIFICATION
241
SUPPLIER INVENTORY
236
238
INVENTORY STORE

Fig.10.

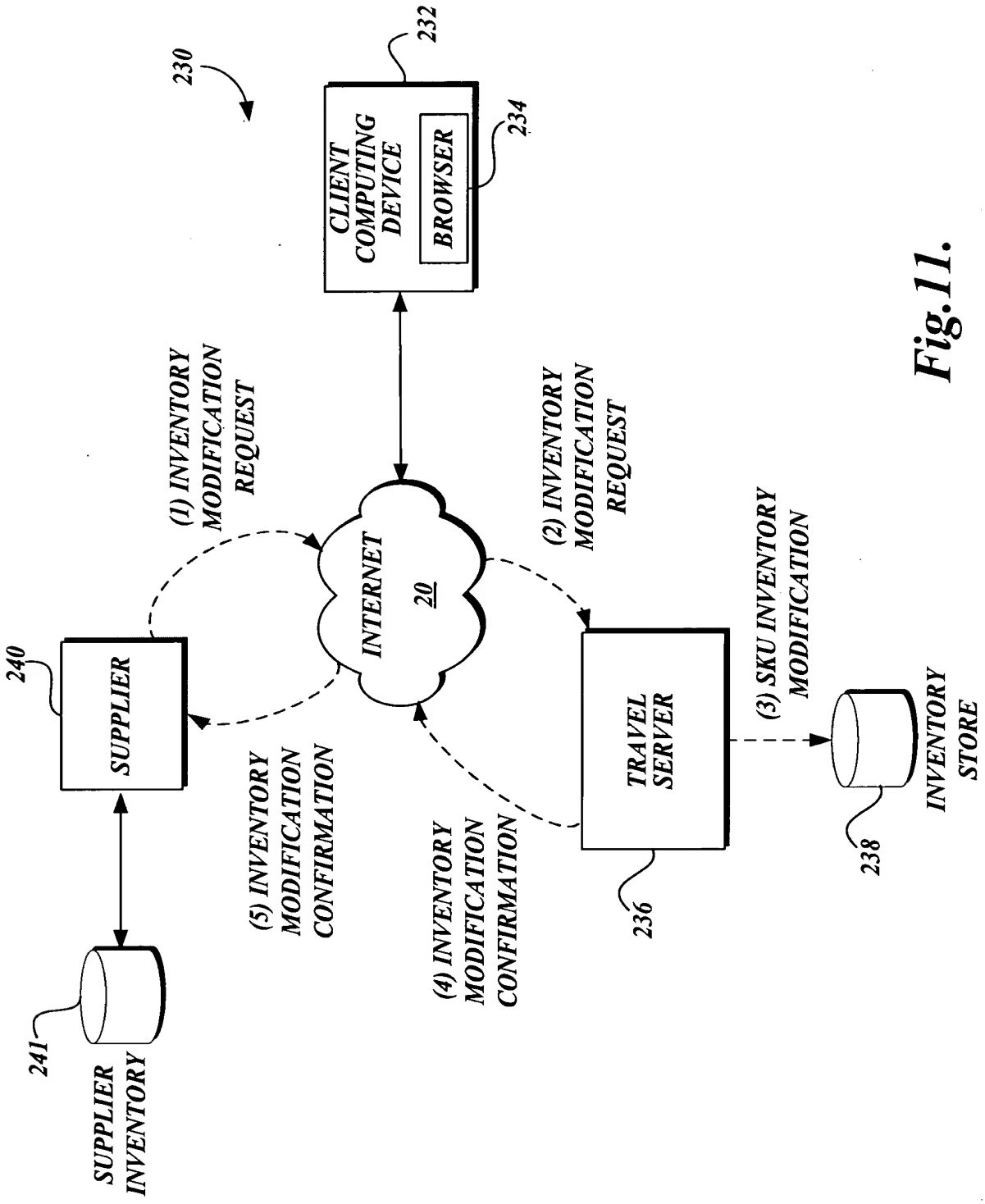
230
232
CLIENT COMPUTING DEVICE
BROWSER
234
(1) INVENTORY MODIFICATION REQUEST
INTERNET 20
(2) INVENTORY MODIFICATION REQUEST
240
SUPPLIER
(5) INVENTORY MODIFICATION CONFIRMATION
(4) INVENTORY MODIFICATION CONFIRMATION
TRAVEL SERVER
(3) SKU INVENTORY MODIFICATION
INVENTORY STORE
241
SUPPLIER INVENTORY
236
238

Fig.11.

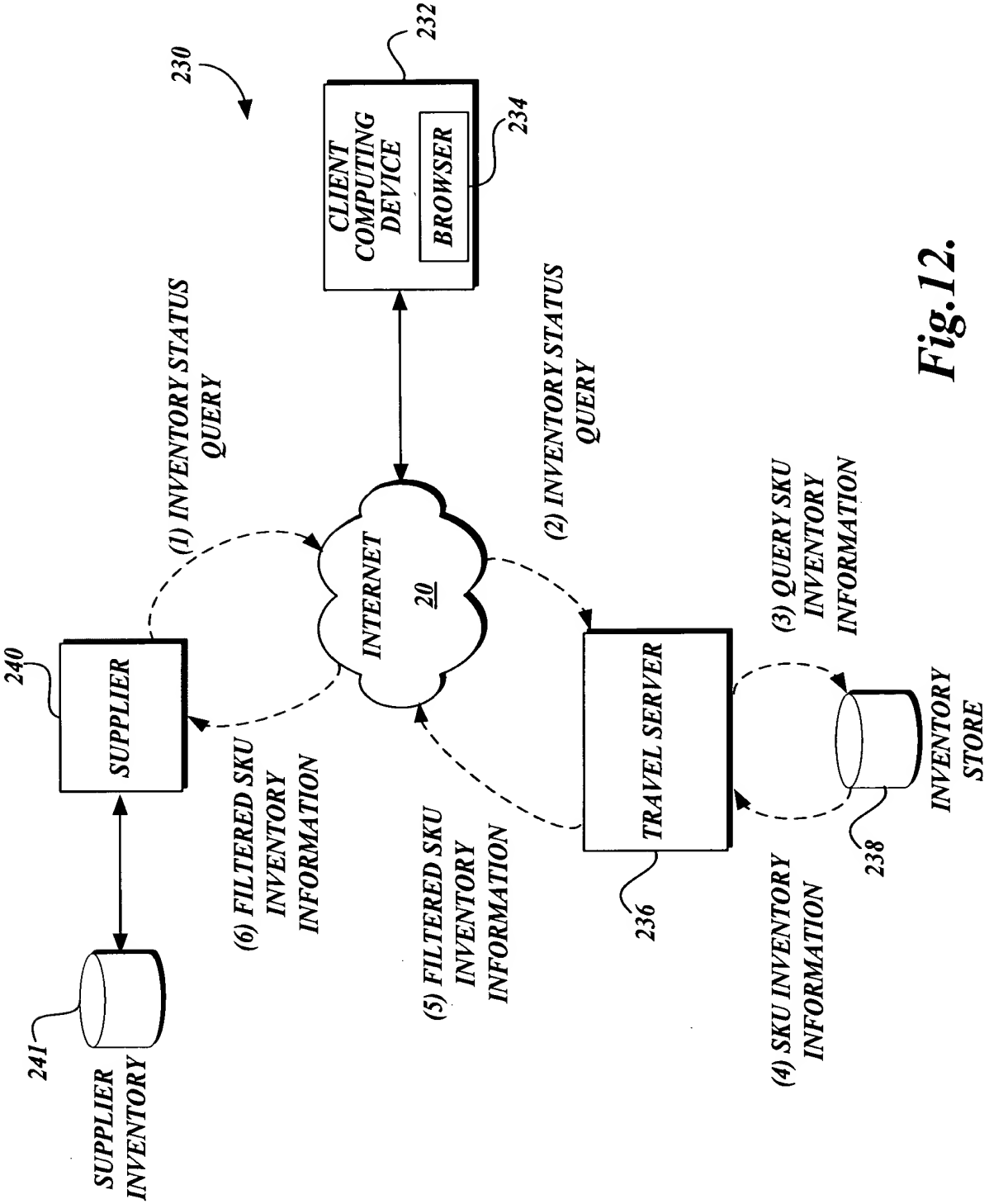
230
232
CLIENT COMPUTING DEVICE
BROWSER
234
(1) INVENTORY STATUS QUERY
(2) INVENTORY STATUS QUERY
INTERNET
20
240
SUPPLIER
(6) FILTERED SKU INVENTORY INFORMATION
(5) FILTERED SKU INVENTORY INFORMATION
TRAVEL SERVER
(3) QUERY SKU INVENTORY INFORMATION
(4) SKU INVENTORY INFORMATION
236
238
INVENTORY STORE
241
SUPPLIER INVENTORY

Fig.12.

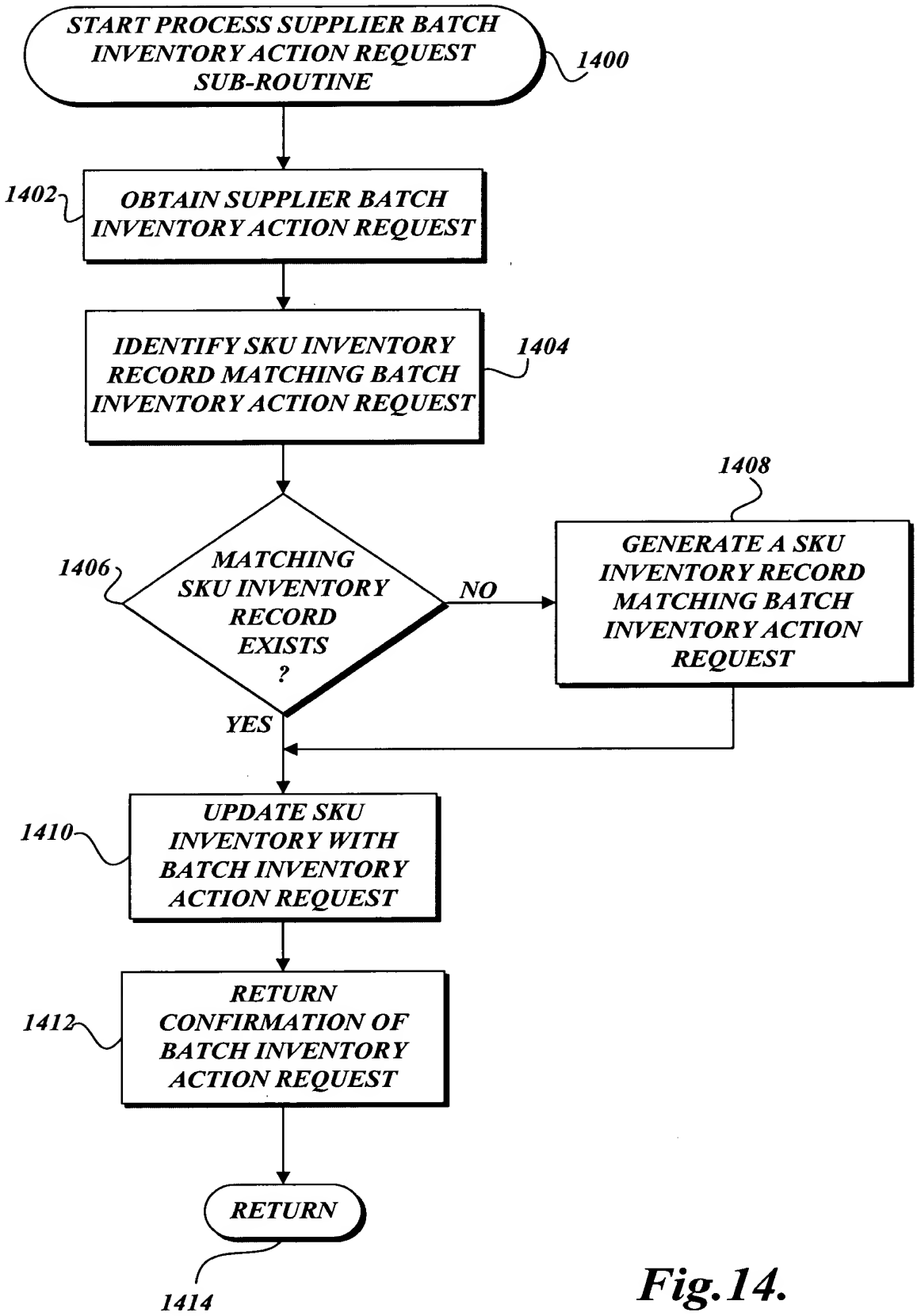
START PROCESS SUPPLIER BATCH INVENTORY ACTION REQUEST SUB-ROUTINE
1400
1402
OBTAIN SUPPLIER BATCH INVENTORY ACTION REQUEST
IDENTIFY SKU INVENTORY RECORD MATCHING BATCH INVENTORY ACTION REQUEST
1404
1406
MATCHING SKU INVENTORY RECORD EXISTS ?
NO
1408
GENERATE A SKU INVENTORY RECORD MATCHING BATCH INVENTORY ACTION REQUEST
YES
1410
UPDATE SKU INVENTORY WITH BATCH INVENTORY ACTION REQUEST
1412
RETURN CONFIRMATION OF BATCH INVENTORY ACTION REQUEST
RETURN
1414

Fig.14.

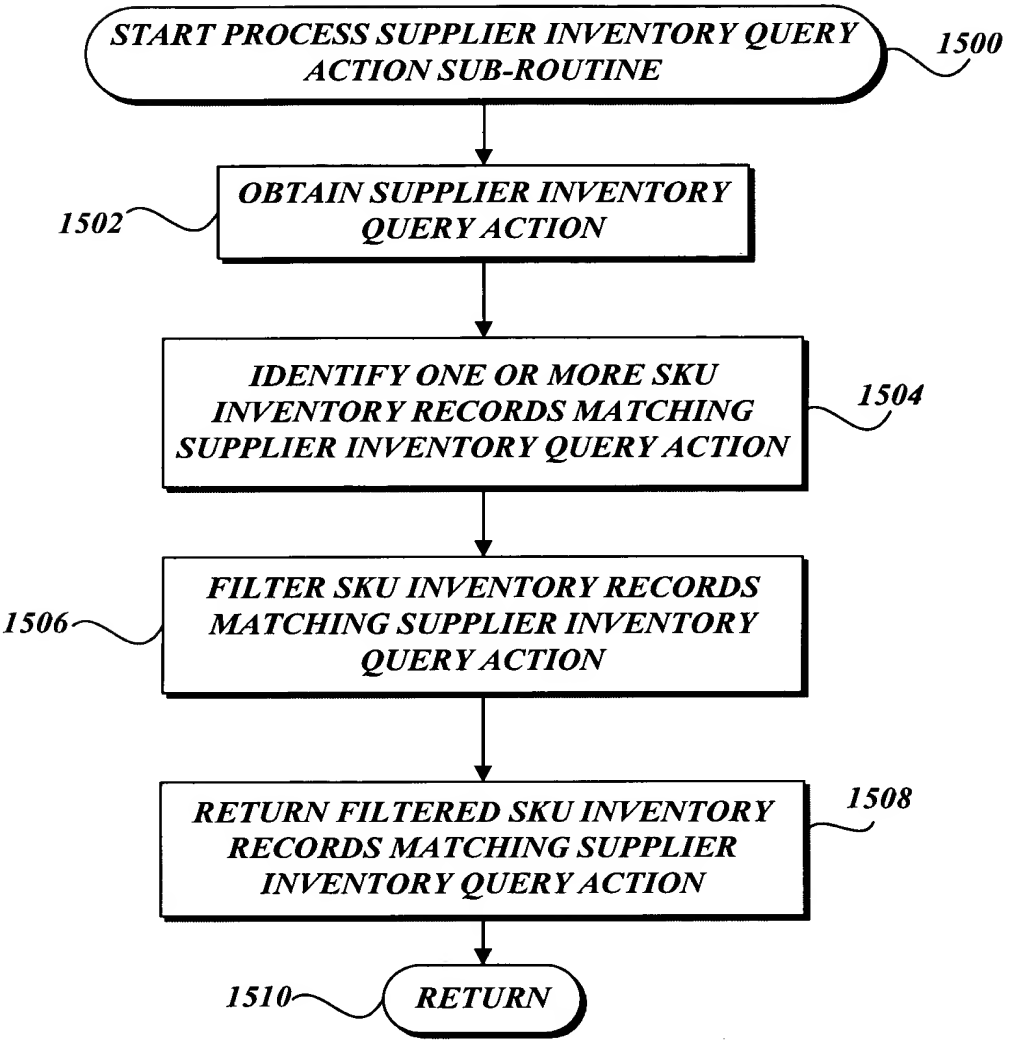
START PROCESS SUPPLIER INVENTORY QUERY ACTION SUB-ROUTINE
1500
OBTAIN SUPPLIER INVENTORY QUERY ACTION
1502
IDENTIFY ONE OR MORE SKU INVENTORY RECORDS MATCHING SUPPLIER INVENTORY QUERY ACTION
1504
FILTER SKU INVENTORY RECORDS MATCHING SUPPLIER INVENTORY QUERY ACTION
1506
RETURN FILTERED SKU INVENTORY RECORDS MATCHING SUPPLIER INVENTORY QUERY ACTION
1508
RETURN
1510

Fig.15.

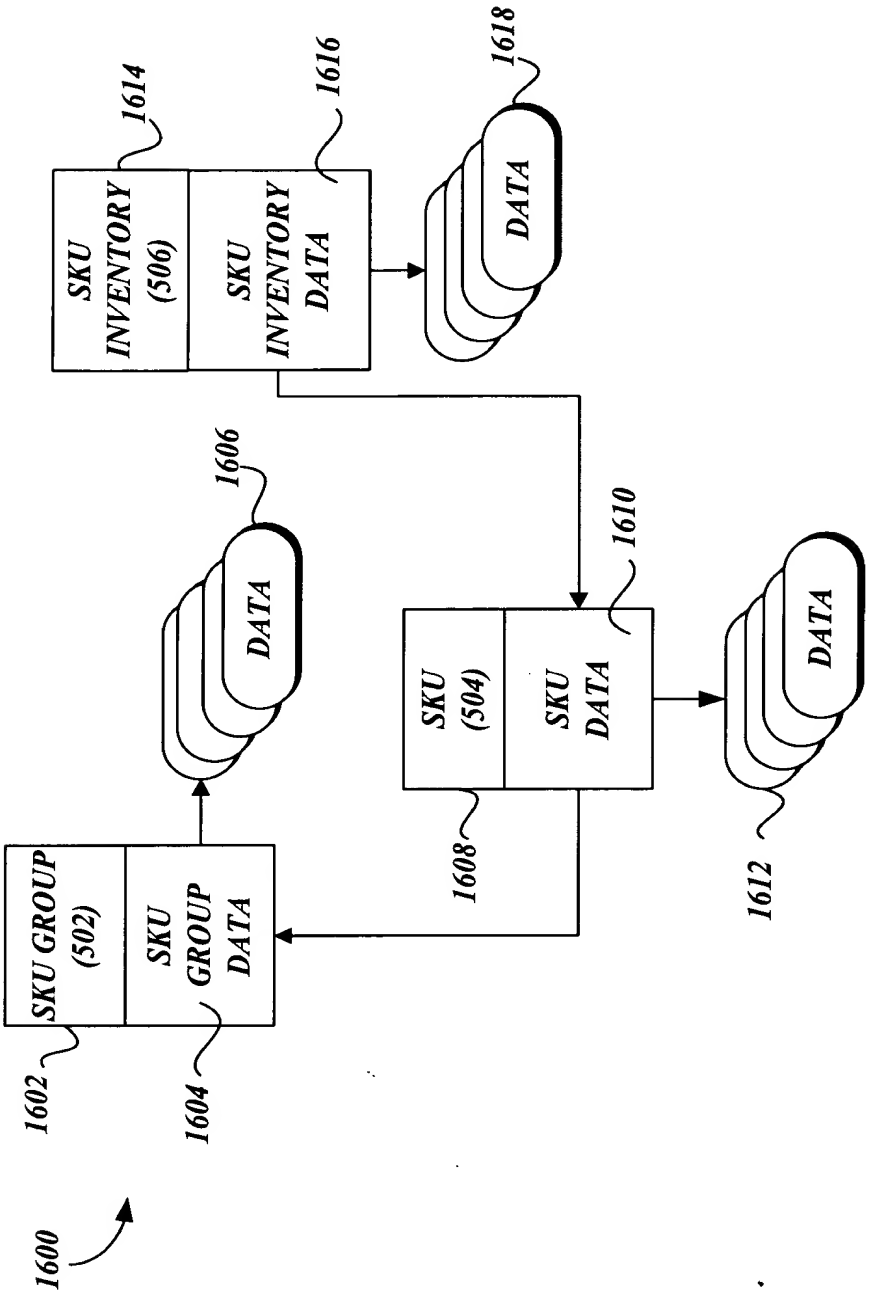
1600
SKU GROUP (502)
SKU GROUP DATA
1602
1604
DATA
1606
SKU (504)
SKU DATA
1608
1610
DATA
1612
SKU INVENTORY (506)
SKU INVENTORY DATA
1614
1616
DATA
1618

Fig.16.

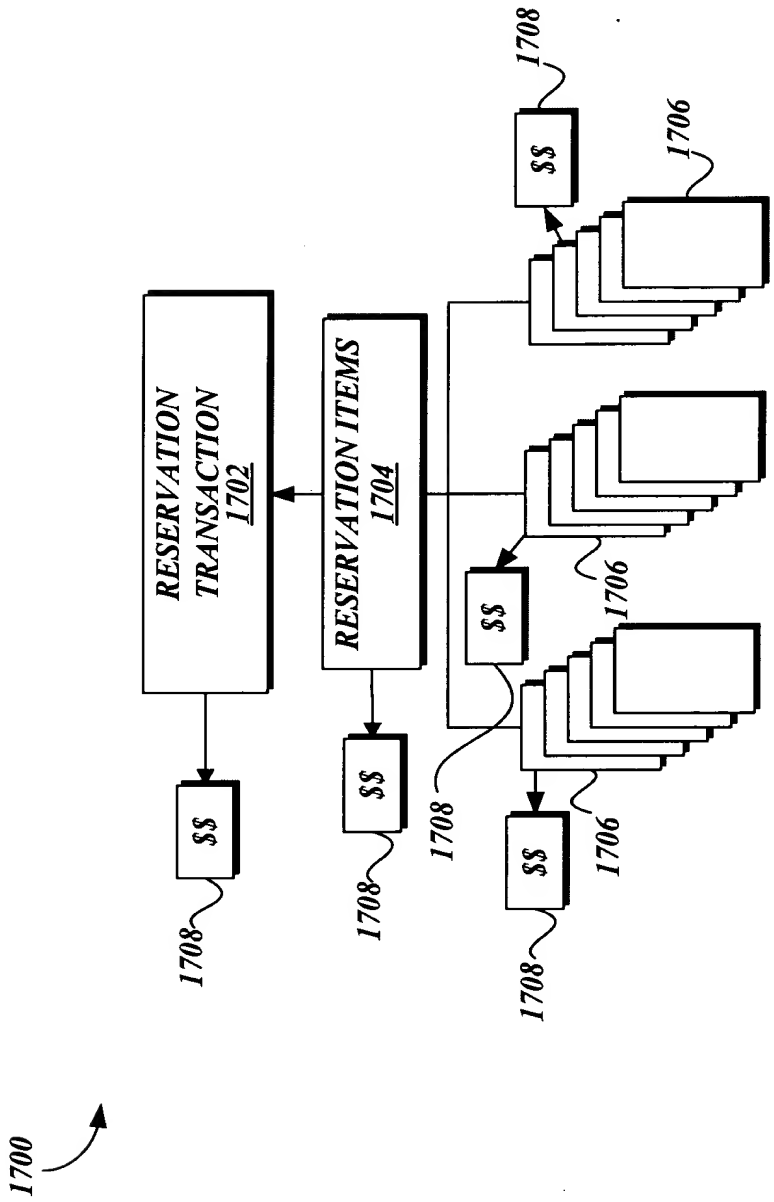
1700
RESERVATION TRANSACTION 1702
RESERVATION ITEMS 1704
$$
1706
1708

Fig.17.

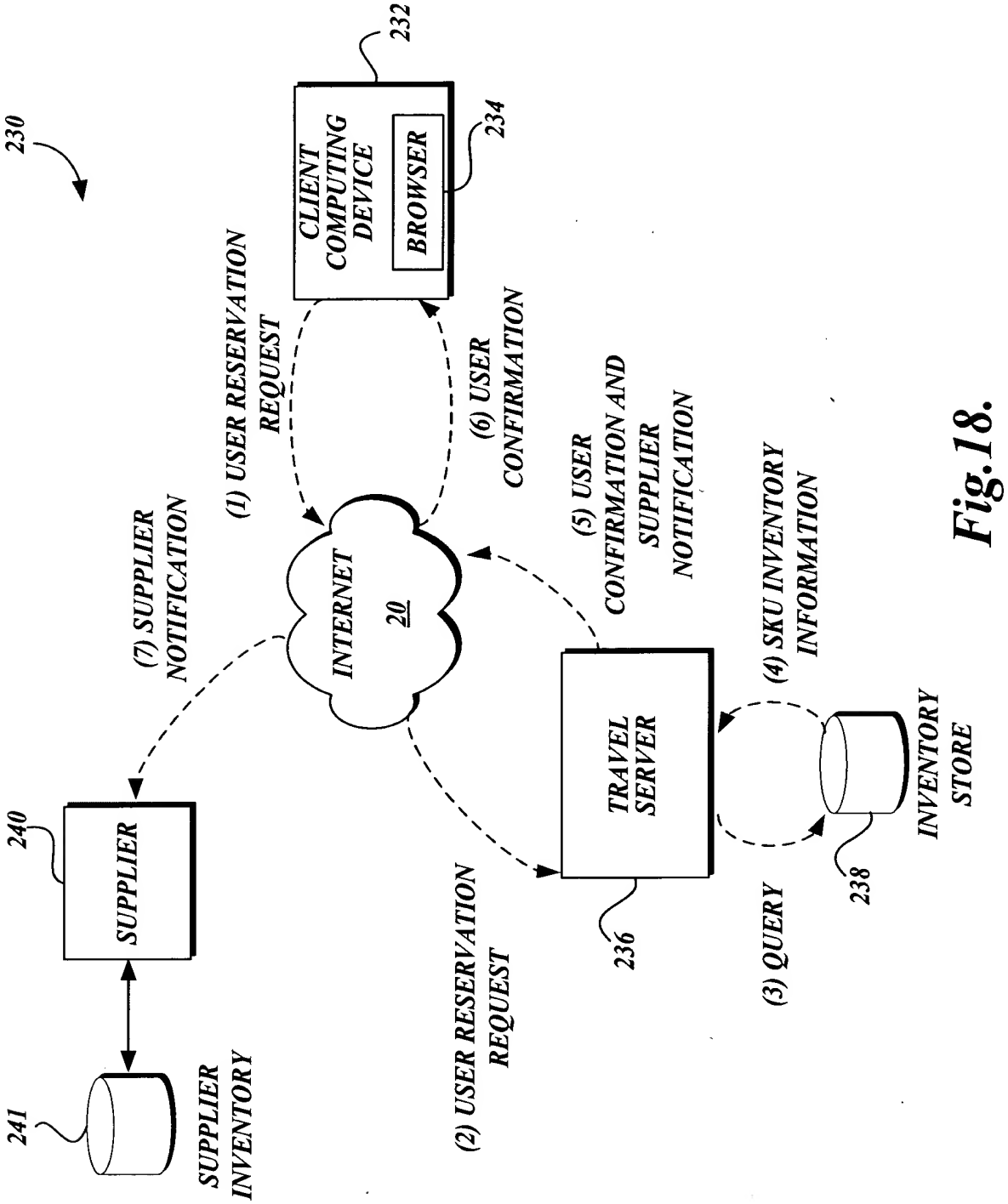
230
CLIENT COMPUTING DEVICE
232
BROWSER
234
(1) USER RESERVATION REQUEST
(6) USER CONFIRMATION
INTERNET
20
(7) SUPPLIER NOTIFICATION
(5) USER CONFIRMATION AND SUPPLIER NOTIFICATION
(4) SKU INVENTORY INFORMATION
SUPPLIER
240
TRAVEL SERVER
236
INVENTORY STORE
238
(2) USER RESERVATION REQUEST
(3) QUERY
241
SUPPLIER INVENTORY

Fig. 18.

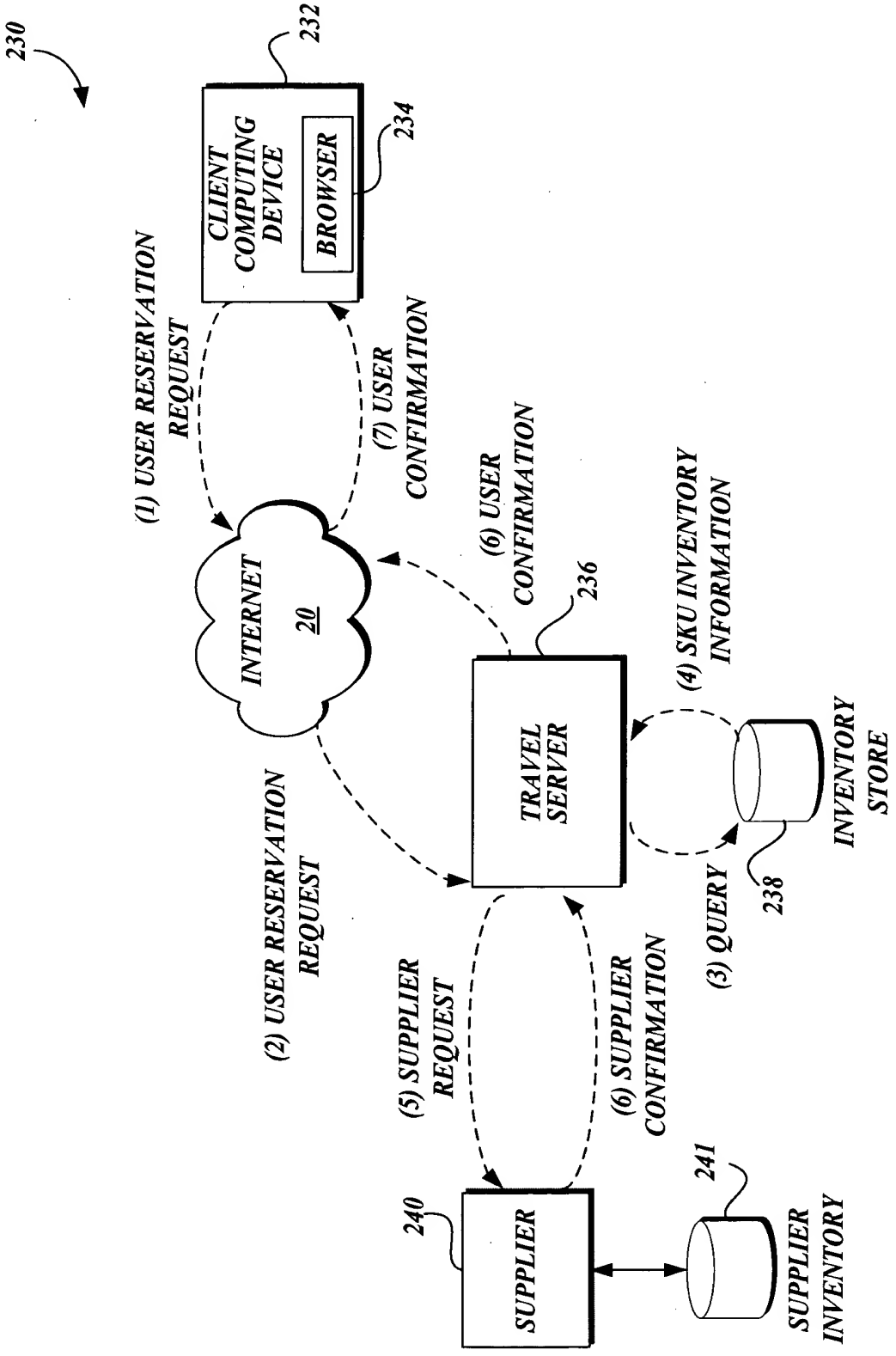
230
232
CLIENT COMPUTING DEVICE
BROWSER
234
(1) USER RESERVATION REQUEST
(7) USER CONFIRMATION
INTERNET 20
(6) USER CONFIRMATION
236
TRAVEL SERVER
(4) SKU INVENTORY INFORMATION
INVENTORY STORE
238
(2) USER RESERVATION REQUEST
(3) QUERY
(5) SUPPLIER REQUEST
(6) SUPPLIER CONFIRMATION
240
SUPPLIER
241
SUPPLIER INVENTORY

Fig.19.

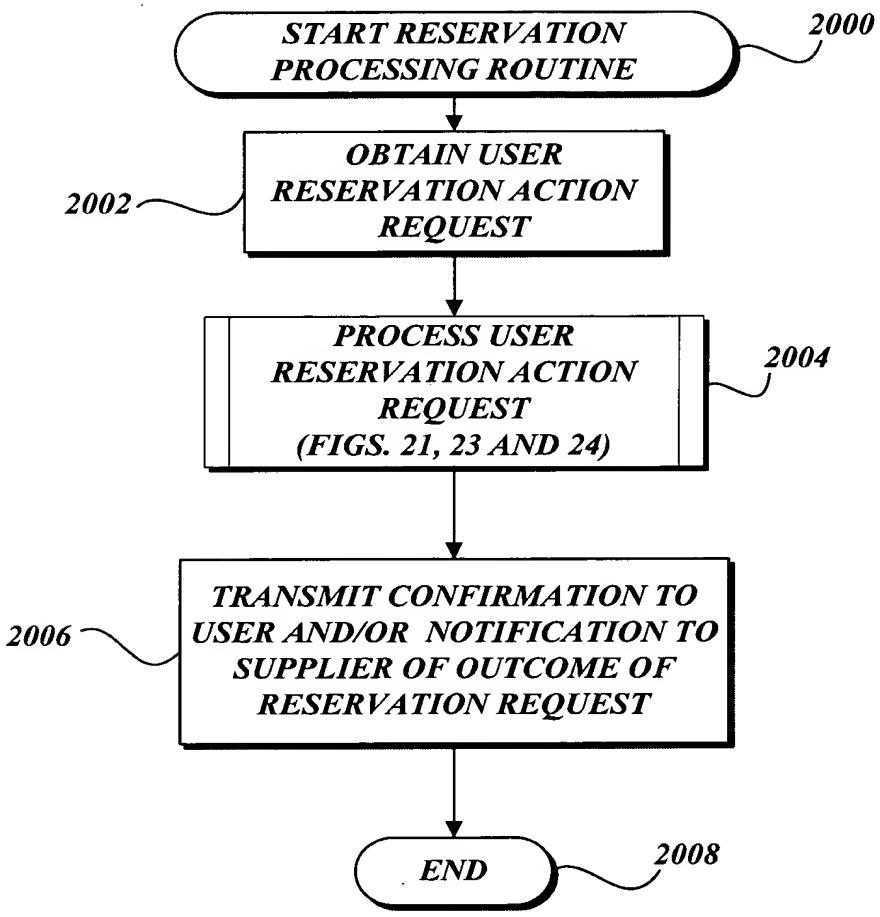
START RESERVATION PROCESSING ROUTINE
2000
OBTAIN USER RESERVATION ACTION REQUEST
2002
PROCESS USER RESERVATION ACTION REQUEST (FIGS. 21, 23 AND 24)
2004
TRANSMIT CONFIRMATION TO USER AND/OR NOTIFICATION TO SUPPLIER OF OUTCOME OF RESERVATION REQUEST
2006
END
2008

Fig.20.

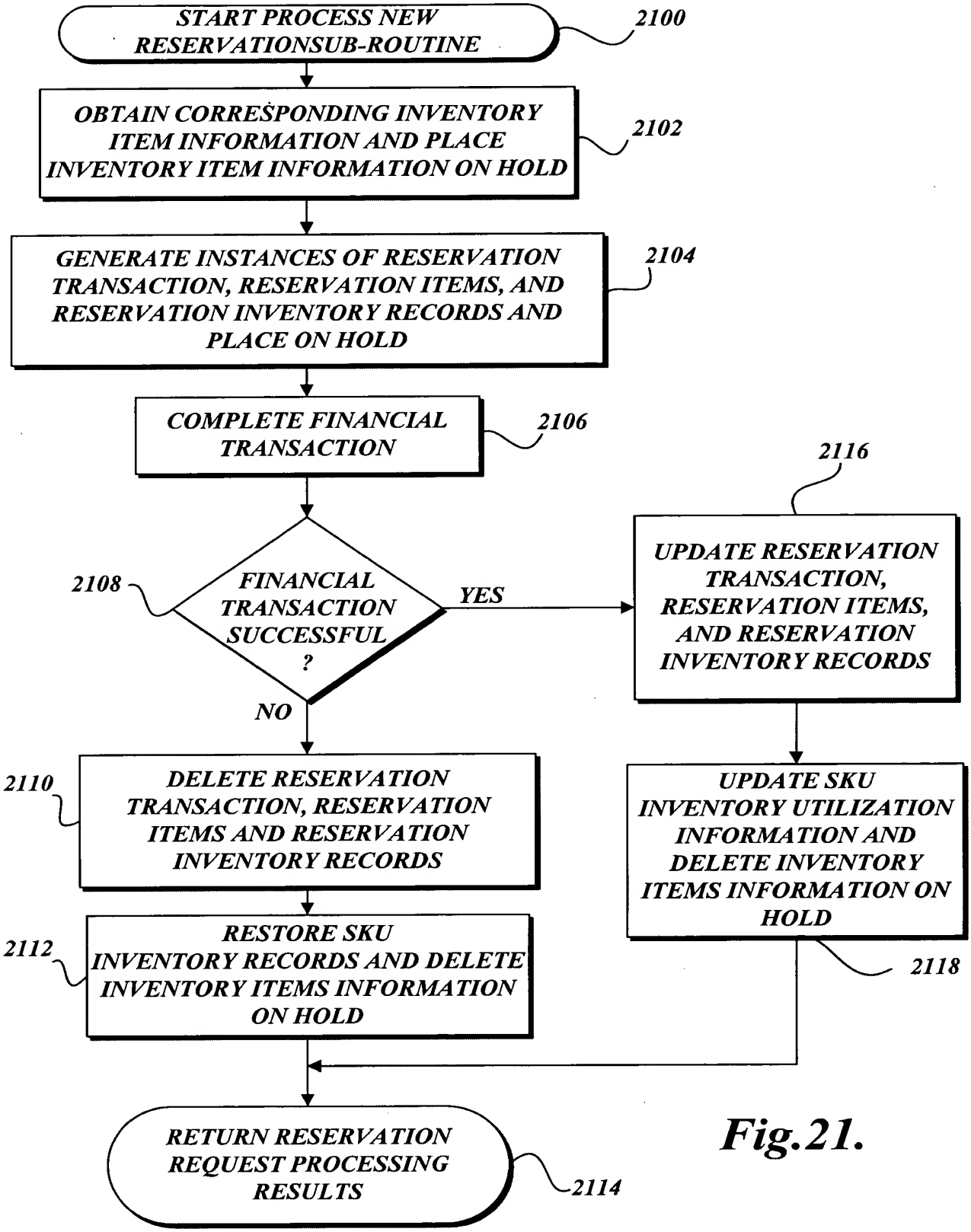
START PROCESS NEW RESERVATIONSUB-ROUTINE
2100
OBTAIN CORRESPONDING INVENTORY ITEM INFORMATION AND PLACE INVENTORY ITEM INFORMATION ON HOLD
2102
GENERATE INSTANCES OF RESERVATION TRANSACTION, RESERVATION ITEMS, AND RESERVATION INVENTORY RECORDS AND PLACE ON HOLD
2104
COMPLETE FINANCIAL TRANSACTION
2106
2108
FINANCIAL TRANSACTION SUCCESSFUL ?
YES
NO
2116
UPDATE RESERVATION TRANSACTION, RESERVATION ITEMS, AND RESERVATION INVENTORY RECORDS
2110
DELETE RESERVATION TRANSACTION, RESERVATION ITEMS AND RESERVATION INVENTORY RECORDS
2112
RESTORE SKU INVENTORY RECORDS AND DELETE INVENTORY ITEMS INFORMATION ON HOLD
UPDATE SKU INVENTORY UTILIZATION INFORMATION AND DELETE INVENTORY ITEMS INFORMATION ON HOLD
2118
RETURN RESERVATION REQUEST PROCESSING RESULTS
2114

Fig.21.

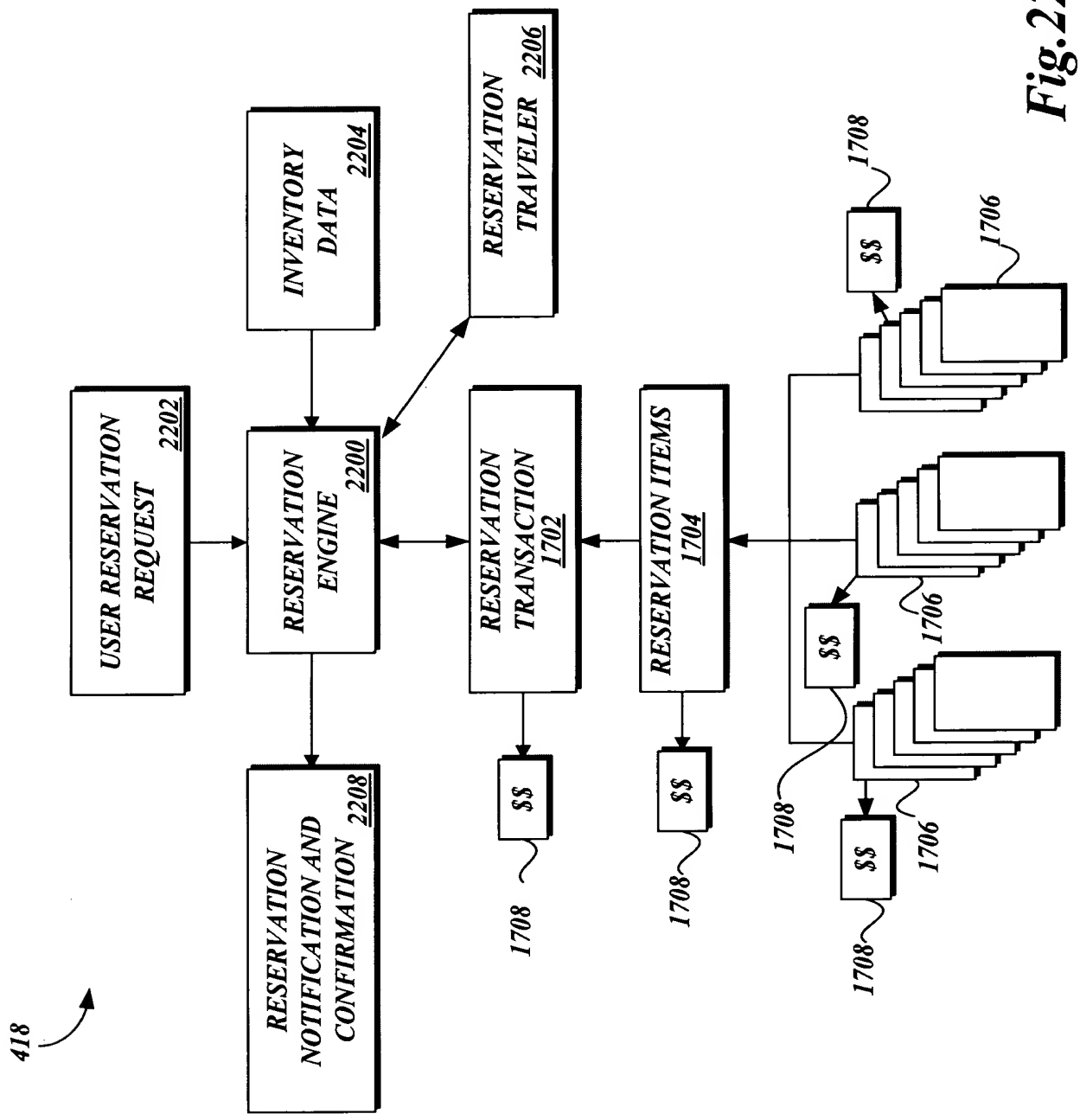
USER RESERVATION REQUEST 2202
RESERVATION ENGINE 2200
INVENTORY DATA 2204
RESERVATION TRAVELER 2206
RESERVATION TRANSACTION 1702
RESERVATION ITEMS 1704
RESERVATION NOTIFICATION AND CONFIRMATION 2208
$$
1706
1708
418

Fig.22.

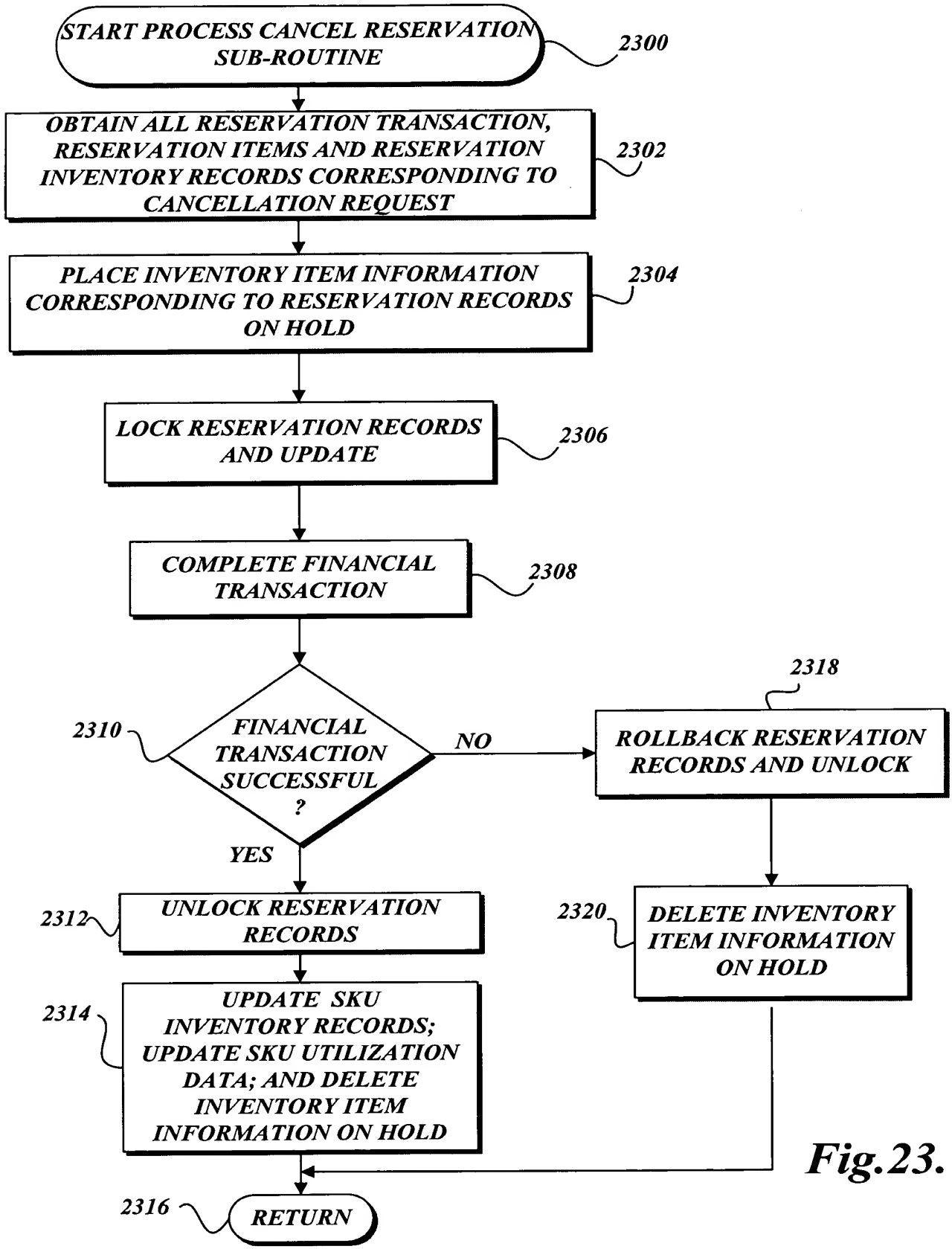
START PROCESS CANCEL RESERVATION SUB-ROUTINE
2300
OBTAIN ALL RESERVATION TRANSACTION, RESERVATION ITEMS AND RESERVATION INVENTORY RECORDS CORRESPONDING TO CANCELLATION REQUEST
2302
PLACE INVENTORY ITEM INFORMATION CORRESPONDING TO RESERVATION RECORDS ON HOLD
2304
LOCK RESERVATION RECORDS AND UPDATE
2306
COMPLETE FINANCIAL TRANSACTION
2308
2310
FINANCIAL TRANSACTION SUCCESSFUL ?
NO
2318
ROLLBACK RESERVATION RECORDS AND UNLOCK
YES
2312
UNLOCK RESERVATION RECORDS
2320
DELETE INVENTORY ITEM INFORMATION ON HOLD
2314
UPDATE SKU INVENTORY RECORDS; UPDATE SKU UTILIZATION DATA; AND DELETE INVENTORY ITEM INFORMATION ON HOLD
2316
RETURN

Fig.23.

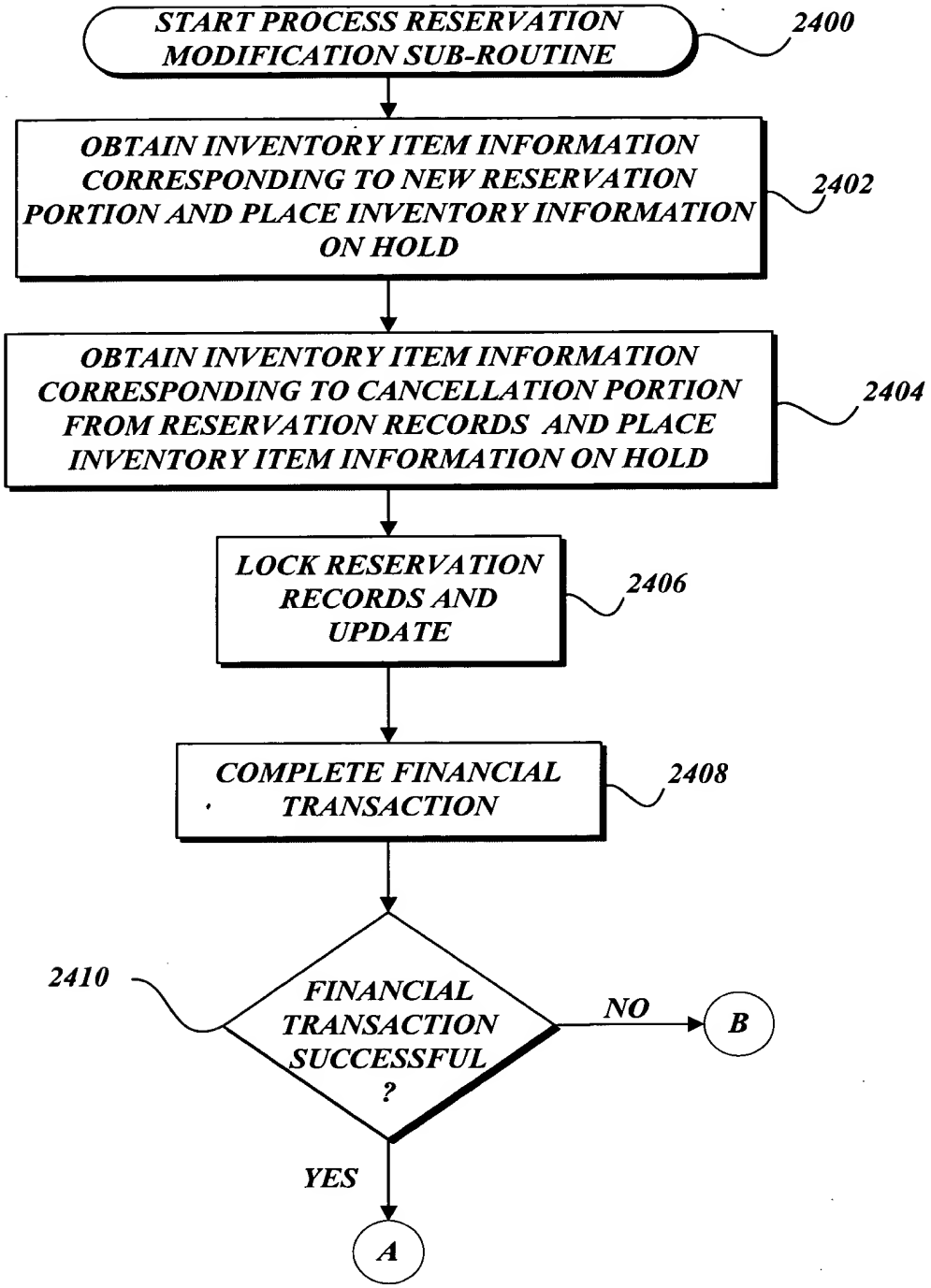
START PROCESS RESERVATION MODIFICATION SUB-ROUTINE
2400
OBTAIN INVENTORY ITEM INFORMATION CORRESPONDING TO NEW RESERVATION PORTION AND PLACE INVENTORY INFORMATION ON HOLD
2402
OBTAIN INVENTORY ITEM INFORMATION CORRESPONDING TO CANCELLATION PORTION FROM RESERVATION RECORDS AND PLACE INVENTORY ITEM INFORMATION ON HOLD
2404
LOCK RESERVATION RECORDS AND UPDATE
2406
COMPLETE FINANCIAL TRANSACTION
2408
2410
FINANCIAL TRANSACTION SUCCESSFUL ?
NO
B
YES
A

Fig.24A.

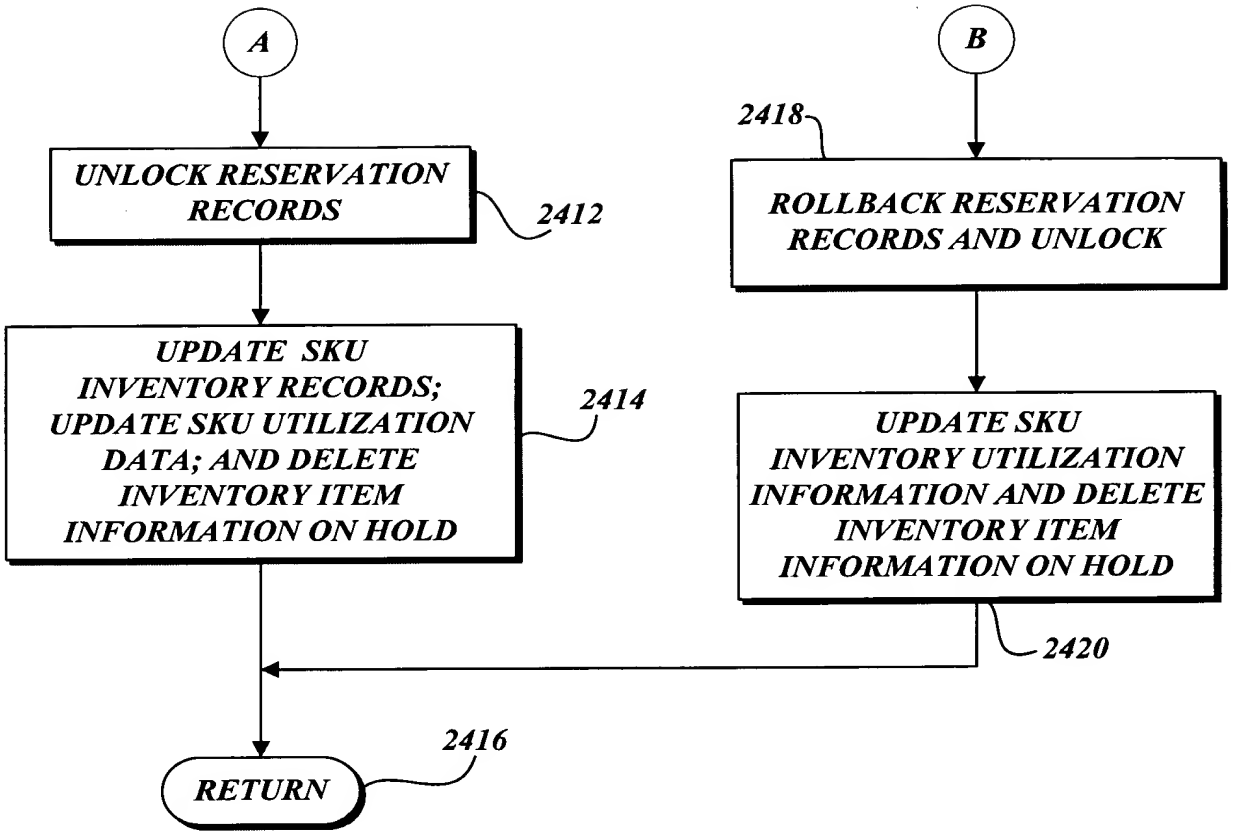
A
B
2418
UNLOCK RESERVATION RECORDS
2412
ROLLBACK RESERVATION RECORDS AND UNLOCK
UPDATE SKU INVENTORY RECORDS; UPDATE SKU UTILIZATION DATA; AND DELETE INVENTORY ITEM INFORMATION ON HOLD
2414
UPDATE SKU INVENTORY UTILIZATION INFORMATION AND DELETE INVENTORY ITEM INFORMATION ON HOLD
2420
2416
RETURN

Fig.24B.

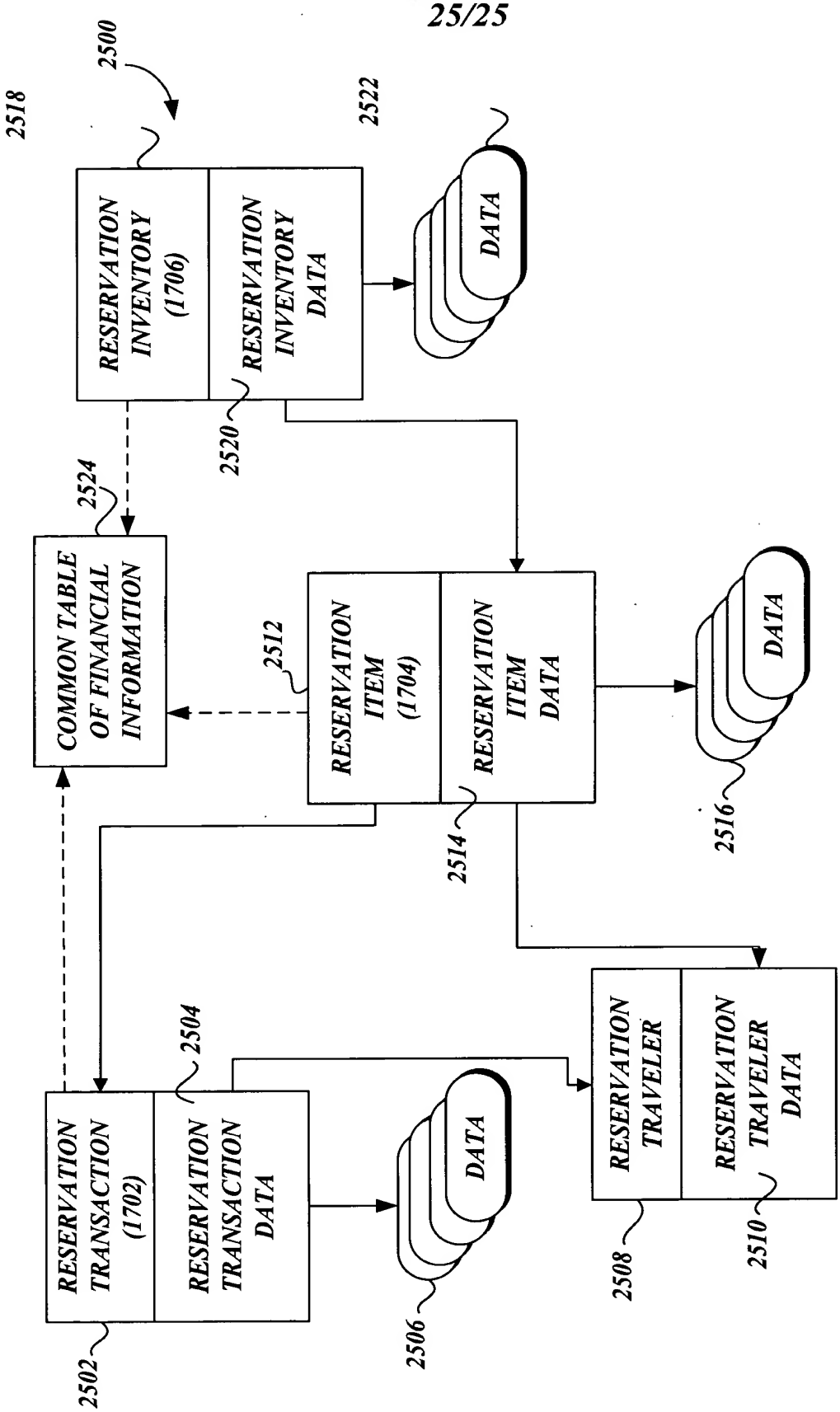
2500
2518
RESERVATION INVENTORY (1706)
RESERVATION INVENTORY DATA
2520
2522
DATA
2524
COMMON TABLE OF FINANCIAL INFORMATION
2512
RESERVATION ITEM (1704)
RESERVATION ITEM DATA
2514
DATA
2516
RESERVATION TRANSACTION (1702)
RESERVATION TRANSACTION DATA
2502
2504
DATA
2506
RESERVATION TRAVELER
RESERVATION TRAVELER DATA
2508
2510

Fig.25.